

## PCT

## INTERNATIONAL SEARCH REPORT

(PCT Article 18 and Rules 43 and 44)

|   |  |  |
|---|--|--|
| Applicant's or agent's file reference<br><b>UC0330PCT</b>   | <b>FOR FURTHER ACTION</b><br>see Form PCT/ISA/220<br>as well as, where applicable, item 5 below. |  |
| International application No.<br><b>PCT/US2004/016409</b>   | International filing date (day/month/year)<br><b>19/05/2004</b>                                  | (Earliest) Priority Date (day/month/year)<br><b>19/05/2003</b> |
| Applicant<br><br><b>E. I. DUPONT DE NEMOURS AND COMPANY</b> |  |  |

This International Search Report has been prepared by this International Searching Authority and is transmitted to the applicant according to Article 18. A copy is being transmitted to the International Bureau.

This International Search Report consists of a total of 4 sheets.

☒ It is also accompanied by a copy of each prior art document cited in this report.

## 1. Basis of the report

- a. With regard to the **language**, the international search was carried out on the basis of the international application in the language in which it was filed, unless otherwise indicated under this item.

☐ The international search was carried out on the basis of a translation of the international application furnished to this Authority (Rule 23.1(b)).

- b. ☐ With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application, see Box No. I.

2. ☐ **Certain claims were found unsearchable** (See Box II).

3. ☐ **Unity of invention is lacking** (see Box III).

4. With regard to the **title**,

☒ the text is approved as submitted by the applicant.

☐ the text has been established by this Authority to read as follows:

5. With regard to the **abstract**,

☒ the text is approved as submitted by the applicant.

☐ the text has been established, according to Rule 38.2(b), by this Authority as it appears in Box No. IV. The applicant may, within one month from the date of mailing of this international search report, submit comments to this Authority.

6. With regards to the **drawings**,

- a. the figure of the **drawings** to be published with the abstract is Figure No. 1

☒ as suggested by the applicant.

☐ as selected by this Authority, because the applicant failed to suggest a figure.

☐ as selected by this Authority, because this figure better characterizes the invention.

- b. ☐ none of the figures is to be published with the abstract.

## INTERNATIONAL SEARCH REPORT

International Application No

PCT/US2004/016409

## A. CLASSIFICATION OF SUBJECT MATTER

IPC 7 H01L51/30 H01L51/52 H01B1/12 C08G61/12 C08G73/02  
C08K3/10

According to International Patent Classification (IPC) or to both national classification and IPC

## B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC 7 H01B C08G H01L C08K

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

EPO-Internal, WPI Data, PAJ

## C. DOCUMENTS CONSIDERED TO BE RELEVANT

| Category * | Citation of document, with indication, where appropriate, of the relevant passages   | Relevant to claim No.  |
|------------|--|------------------------|
| X          | US 2002/179900 A1 (GREUEL GEORG ET AL)<br>5 December 2002 (2002-12-05)<br>paragraphs '0006!, '0007!, '0010!,<br>'0011!, '0014!<br>examples 1-4<br>claims 1-3,5,6 | 1-19                   |
| X          | US 2001/022497 A1 (KISHIMOTO HIROSHI ET AL) 20 September 2001 (2001-09-20)<br>paragraphs '0095!, '0237! - '0241!<br>-----<br>-/-                                 | 1-3,<br>5-12,<br>14-19 |

☒ Further documents are listed in the continuation of box C.☒ Patent family members are listed in annex.

## \* Special categories of cited documents:

\*A\* document defining the general state of the art which is not considered to be of particular relevance

\*E\* earlier document but published on or after the international filing date

\*L\* document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)

\*O\* document referring to an oral disclosure, use, exhibition or other means

\*P\* document published prior to the international filing date but later than the priority date claimed

\*T\* later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention

\*X\* document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone

\*Y\* document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.

\*Z\* document member of the same patent family

Date of the actual completion of the international search

10 September 2004

Date of mailing of the international search report

24/09/2004

Name and mailing address of the ISA

European Patent Office, P.B. 5818 Patentlaan 2  
NL - 2280 HV Rijswijk  
Tel. (+31-70) 340-2040, Tx. 31 651 epo nl,  
Fax: (+31-70) 340-3016

Authorized officer

Russell, G

## C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

| Category * | Citation of document, with indication, where appropriate, of the relevant passages   | Relevant to claim No.       |
|------------|--|-----------------------------|
| X          | <p>ELSCHNER A ET AL: "HIGH-RESISTIVITY PEDT/PSS FOR REDUCED CROSSTALK IN PASSIVE MATRIX OELS"</p> <p>ASIA DISPLAY / IDW'01. PROCEEDINGS OF THE 21ST INTERNATIONAL DISPLAY RESEARCH CONFERENCE IN CONJUNCTION WITH THE 8TH INTERNATIONAL DISPLAY WORKSHOPS. NAGOYA, JAPAN, OCT. 16 - 19, 2001, INTERNATIONAL DISPLAY RESEARCH CONFERENCE. IDRC, SAN JOSE, CA : SI, vol. CONF. 21 / 8, 16 October 2001 (2001-10-16), pages 1427-1430, XP001134249 page 1430, right-hand column</p> | 1,2,5,7,<br>10-12,<br>14-19 |
| X          | <p>ELSCHNER A ET AL: "PEDT/PSS FOR EFFICIENT HOLE-INJECTION IN HYBRID ORGANIC LIGHT-EMITTING DIODES"</p> <p>SYNTHETIC METALS, ELSEVIER SEQUOIA, LAUSANNE, CH, vol. 111/112, 1 June 2000 (2000-06-01), pages 139-143, XP000961480 ISSN: 0379-6779 page 140, left-hand column</p>  | 1-3,<br>5-12,<br>14-19      |
| X          | <p>US 5 578 249 A (ABE MASAO ET AL)<br/>26 November 1996 (1996-11-26)</p> <p>examples 3,7,9</p>  | 1,2,5,7,<br>10-12,<br>14-16 |
| X          | <p>US 2001/044492 A1 (KRESS ROBERT J ET AL)<br/>22 November 2001 (2001-11-22)</p> <p>paragraphs '0052!, '0054!<br/>tables 1-3</p>  | 1-3,6-8,<br>10-12,<br>14-16 |
| X          | <p>US 2003/087991 A1 (ENGEL MICHAEL R ET AL)<br/>8 May 2003 (2003-05-08)</p> <p>example I</p>  | 1-3,6-8,<br>10-12,<br>14-16 |

## INTERNATIONAL SEARCH REPORT

Information on patent family members

International Application No

PCT/US2004/016409

| Patent document<br>cited in search report |    | Publication<br>date | Patent family<br>member(s) | Publication<br>date |
|---|----|---------------------|----------------------------|---------------------|
| US 2002179900                             | A1 | 05-12-2002          | CN 1461500 T               | 10-12-2003          |
|   |    |                     | EP 1382075 A1              | 21-01-2004          |
|   |    |                     | WO 02084759 A1             | 24-10-2002          |
|   |    |                     | JP 2004519830 T            | 02-07-2004          |
|   |    |                     | TW 565013 B                | 01-12-2003          |
|   |    |                     | TW 565013 Y                | 01-12-2003          |
| US 2001022497                             | A1 | 20-09-2001          | JP 2001237069 A            | 31-08-2001          |
|   |    |                     | JP 2001257073 A            | 21-09-2001          |
|   |    |                     | CN 1327360 A               | 19-12-2001          |
|   |    |                     | EP 1128438 A1              | 29-08-2001          |
|   |    |                     | TW 538540 B                | 21-06-2003          |
|   |    |                     | US 2003127969 A1           | 10-07-2003          |
|   |    |                     | US 2004046498 A1           | 11-03-2004          |
|   |    |                     | JP 2002015867 A            | 18-01-2002          |
| US 5578249                                | A  | 26-11-1996          | EP 0579027 A1              | 19-01-1994          |
|   |    |                     | JP 3275061 B2              | 15-04-2002          |
|   |    |                     | JP 6306280 A               | 01-11-1994          |
|   |    |                     | JP 3526449 B2              | 17-05-2004          |
|   |    |                     | JP 2002179911 A            | 26-06-2002          |
| US 2001044492                             | A1 | 22-11-2001          | EP 1081546 A1              | 07-03-2001          |
| US 2003087991                             | A1 | 08-05-2003          | EP 1406768 A2              | 14-04-2004          |
|   |    |                     | WO 03029015 A2             | 10-04-2003          |